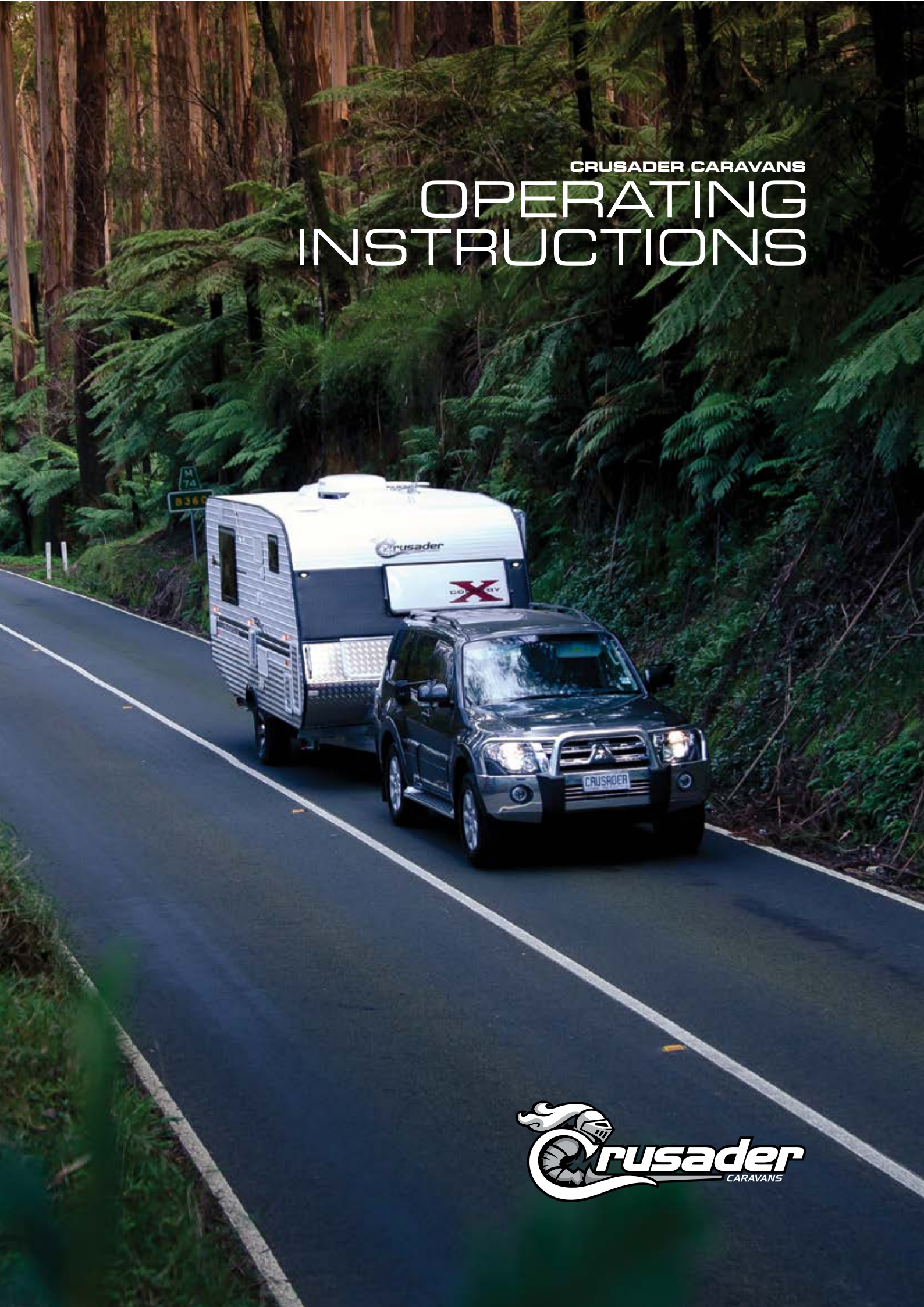
CRUSADER CARAVANS
OPERATING INSTRUCTIONS
Crusader
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CARAVANS

Thank you for choosing a Crusader caravan. Welcome to the Crusader family. We wish you safe, enjoyable and trouble free caravanning.

To assist you with familiarizing yourself with your caravan and its' components we have prepared this basic handbook for your easy reference. We trust it is of benefit to you

Basic Cleaning

Just like your car, your caravan requires regular inspection, maintenance and cleaning. Clean the outside to remove any dirt and apply a suitable polish to protect it from the elements. Clean the inside surfaces with an anti-bacterial cleaning solution and vacuum the floor. If you plan to clean the upholstery and curtains, choose a warm day so you can leave the door and windows open.

REMEMBER: DO NOT USE HIGH PRESSURE WATER SPRAY ON THE OUTSIDE OF YOUR VAN

Note: provisions of your caravan warranty coverage determine that you must have your caravan serviced and inspected on a regular basis by a recognised Crusader Caravans service agent

Start at the front of the caravan

Check Couplings

- Off road type couplings: Ensure coupling moves freely – oil or grease as necessary
- Fixed Couplings: check the operation of spindle and screw nut.
- **NOTE**: On all couplings, trigger lock on handle should be moving freely and in good condition (oil regularly).

Check Handbrake

- Check for corrosion where base plate affixes to the A frame.
- Hand brake lever should move freely and lubricated regularly
- Check condition of brake cable and pulleys.

Check Safety Chains

- Inspect for signs of rust or cracks at fixing point on caravan draw bar
- Chains must be long enough to reach towbar chain hooks (crossed over) allowing for cornering.

Check Jockey Wheel

- Handle and wheel should turn freely (if lubrication is needed, squirt oil under handle to travel down shaft).
- Wheel should spin on axle freely.
- Check jockey wheel clamp and clamp bolt for easy operation.

If your caravan is being stored for extended periods and is not under cover it is imperative that regular checks of the caravan be made to ensure that there is no evidence of damage to the inside of the caravan particularly after heavy or prolonged periods of rain.

The caravan door, windows and hatches should be opened on a regular basis to air the caravan interior

Chassis frame

- Should be checked regularly for rust and stress fractures, particularly outriggers and all cross member fixing points, 'A' frame, springs and spring hangers and stabiliser legs.
- Check for signs of movement around spring hangers, shackle plates and bushes, U-bolts and fish plates.
- Check corner stabilisers for ease of movement and ensure handle is in good condition.
- Check pull out step for cracks, rust and ease of operation.

Check Wheels, Rims & Tyres

- Check wheel rims for buckles, cracks or other damage after each trip.
- Check tyres for signs of unusual or excessive wear from under/over inflation or wheel alignment problems.
- Bearings and oil seals should be inspected and repacked regularly.
- Electric brake wiring should be checked regularly for damage or disconnect
- Wheel nut tightness and tyre pressures should be checked regularly but should be checked at least every 1500 kilometres

Check Water Tank

- Check hoses for leaks, kinks, signs of damage
- Check hose clamps for tightness.
- Check tank straps for signs of cracking, rust or looseness.
- Check water tank stone protector condition

Corner Moulds, windows & door

- Inspect sealing around corner moulds, windows & doors etc. should be checked regularly for cracks, holes or dislodgement which may allow water entry.
- After heavy or prolonged rain check the inside of the van for water leaks.

Exterior Lighting

- It is an important safety factor that all 12V brake indicator, tail and running lights should be operative and lenses not faded. These should be checked before each departure
- Check rubber seals around all exterior light bases to prevent intrusion of water.
- Check 12V wiring and plug for any signs of breakage or insect nests in 12V plug.

Gas Fittings

- Check gas connections by turning gas bottle on and spraying fittings with soapy water. If bubbles occur it means there is a gas leak. Turn gas off at the gas bottle,
- Check flexible hose for fraying or kinks.

Main Door

- Lubricate door lock and hinges with light oil (CRC type) regularly
- Check condition and operation of annex roller and cabin hooks.
- Door lock tongue and striker plate should be regularly checked for signs of wear.

Interior of Van

- Hatches and operating mechanisms should be cleaned regularly.
- All flyscreens (pop tops only) should be intact and cleaned regularly
- Check cupboard door hinges and stays ease of operation
- Cupboard locks should be lubricated to avoid jamming which may strain and break lock.
- Fridge and stove should be firmly fixed to surrounds - loose bolts could result in appliance jarring loose in travel. (Grasp appliance and attempt to move back and forth).
- Check mattresses regularly for signs of moisture retention - causes premature wear.
- Any discolouration of ply lining around hatch, windows, ceiling, or wall corners indicates the ingress of water. **Rectification of this problem should be attended to without delay**

Running Operation

• Connect the caravan tow plug to your vehicle and ensure all the caravan's lights, indicators and brake lights work correctly. *This procedure should be done prior to each departure*

Repairs

• Any suspected fault or damage to your caravan must be reported and attended to without delay by an authorised Crusader Caravans repair agent for warranty to be valid. Failure to notify and have corrected any known or suspected fault or damage to your caravan by an authorised representative of Crusader Caravans could void your warranty

IMPORTANT NOTE: Any suspected problems with gas lines, gas appliances or any electrical fault should be referred to a qualified gas fitter or qualified electrician respectively and should not be tampered with by an unqualified person.

Caravan awning

Awnings are a valuable part of a caravan. They effectively double the amount of space available.

It is advisable after every trip to wash the awning down and leave extended to dry. If stored for a long period of time it should be extended every 6 months or so to check for mould, etc.

Do not use ordinary household detergents when washing the awning as it may destroy the water resistant coating. Washing with a mild truck wash should keep most of the mould and mildew at bay or a product such as "Tricleanium". Which is 100% alkaline salts not acid like CLR or Sulfuric acid. Reapply a water resistant spray if necessary. For particularly stubborn stains use **CHUX Magic Eraser** from the laundry aisle of your supermarket. Keep an eye on any repairs that may need attention with your awning, as catching them early can mean the difference between a simple repair or a costly replacement.

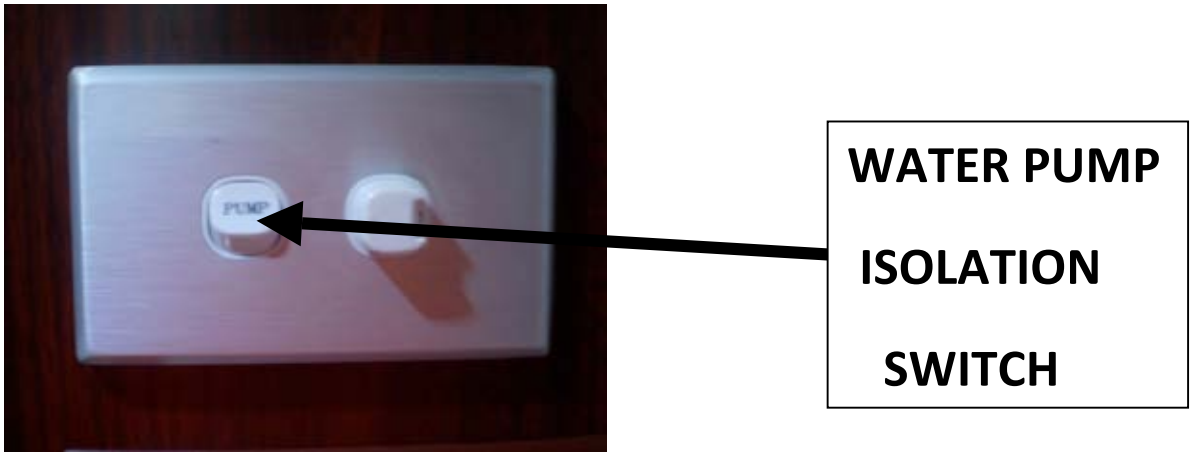
Finished and ready to hit the road again!

WATER PUMP OPERATION:

The water pump is operated by an isolation switch located inside the van (as seen below)

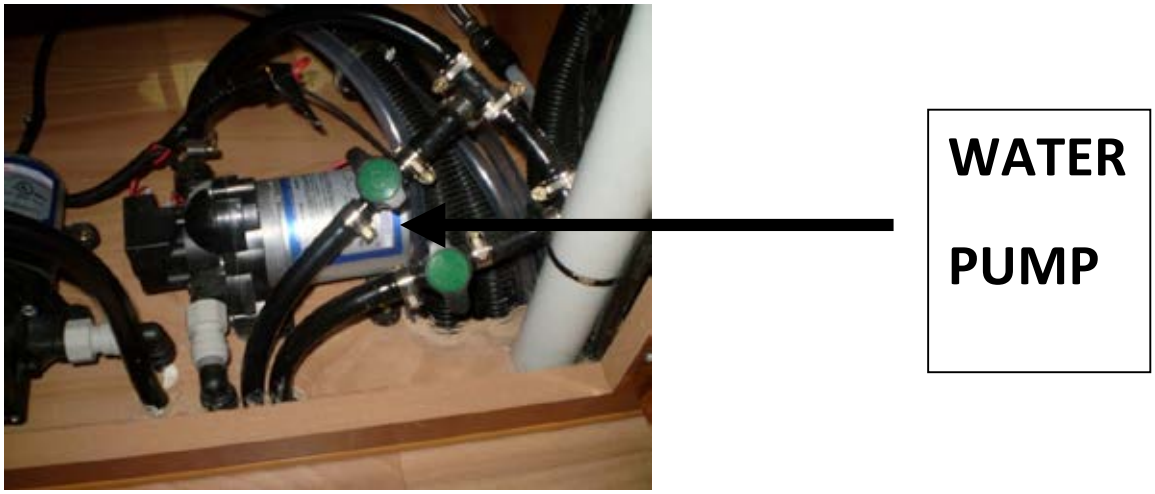
IMPORTANT.

When connected to mains water pressure, ensure that this isolation switch is turned off – OTHERWISE you will continue to pump water from your water tanks and NOT mains water.



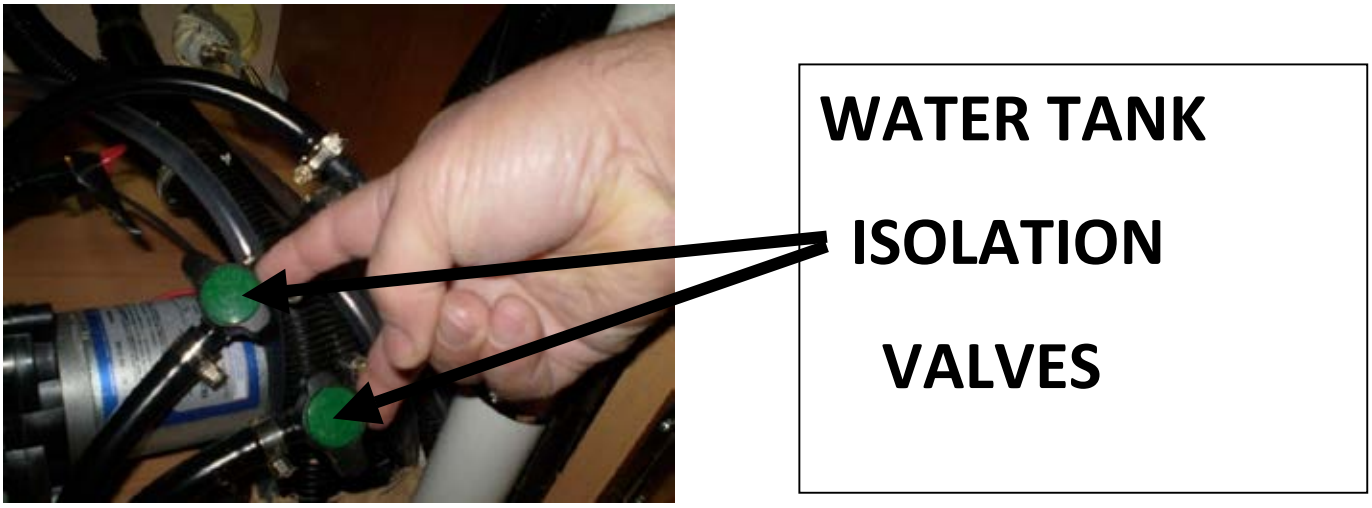
The water pump is normally located under the fridge or in a separate cupboard nearby.

See picture below.



The water tanks are controlled by two separate isolation valves. It is ideal to close off one of these valves to ensure that water is only pumped from one tank at a time. This will prevent the pump sucking air from an empty tank if both valves are open. Then once this tank has emptied shut off and open the other valve to the water tank with water. This will then enable water to be pumped from the second tank without experiencing any difficulty or damage to the pump. (Pumping dry and burning out)

Isolating either valve restricts the flow of water from either tank. (See Below)



IMPORTANT.

Remember: when connected to mains water pressure, ensure that the pump isolation switch is turned off – OTHERWISE you will continue to pump water from your water tanks and NOT mains water.

BLEEDING THE WATER SYSTEM

Minimal water flow from any water tap when operating under the water pump could indicate air in the water system which means the water pump is sucking air (cavitating) If this occurs the system will have to be "bled" eg. Exclude the air from the water system.

Procedure: Open all taps (Ensuite – vanity – shower – kitchen – A frame tap)

Turn on water pump. Start with the tap on the "A" frame....once water is flowing normally turn tap off....follow same procedure with kitchen tap – vanity and shower.

The system has now been bled of any air pockets.

HOT WATER UNIT OPERATION:

SUBURBAN GAS – ELECTRIC HOT WATER UNIT

To operate this unit on 240 volts

Before you proceed to operate the Hot Water Unit ensure that there is water in the water tank of the hot water unit.

You can check this by releasing the pressure release valve to ascertain that there is continuous water flow out from the unit. See picture 1.

picture 1:

If not – ensure that the mains water is connected to the caravan or ensure that your water pump switch is operating (Picture 2) and there is sufficient water in the water tanks fitted to the van.

Picture 2:

WATER PUMP SWITCH

240 Volt operation:

IMPORTANT: There are three switches associated with using the hot water unit.

Step 1. Inside the van, as depicted below (picture 'A') you will find a Hot Water isolation switch. This switch provides power to the 240 volt power point where the HWU is plugged into to operate the unit.

Picture 'A'

HOT WATER UNIT ISOLATION SWITCH

Step 2. The on/off switch on the hot water unit must be left on at all times as the "isolation switch" in picture "A" acts as the power shut off switch to the hot water unit from inside the caravan. This 'On / Off' switch (picture 'B') is located on the unit and accessed from the external hatch opening. This is the main 240 volt switch to the unit and must be left on at all times as the isolation switch (picture 'A') works in conjunction with this switch (picture 'B')

Picture 'B'

HOT WATER UNIT

ON/OFF SWITCH

Step 3.

The hot water unit is connected to a 240 volt power point located inside a cupboard near the unit. Ensure that this is plugged in and switched on.

See below:

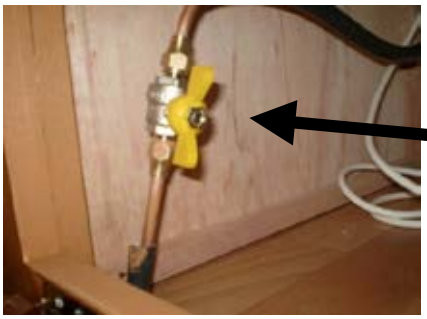
If any one of these three switches is in the 'OFF' position then the hot water unit will not operate under 240 volt power.

SUBURBAN GAS – ELECTRIC HOT WATER UNIT

To operate unit on gas

Ensure all 240 volt power to hot water unit is switched off

Ensure the gas bottles are full and the gas line is open. Also ensure that the gas valve is open to allow gas to flow to the unit. By turning the 'Water Heater' button (picture 'C') on the red 'reset' red light will illuminate and automatically operate the unit.



Valve is now open

Picture 'C'

Red light will illuminate when gas unit is operating or reheating

WARNING: DO NOT HAVE

THE 240 VOLT AND GAS SWITCH

OPERATING AT THE SAME TIME.

TRUMA GAS – ELECTRIC HOT WATER UNIT

Before operating the TRUMA Hot Water Unit ensure there is water in the water tank of the hot water unit. Also ensure that the cover is removed before turning the hot water unit on.

COVER TO VENT:

MUST BE REMOVED

FOR UNIT TO OPERATE

240 volt isolation switch to wall power point plug inside cupboard for hot water unit

Gas switch

WARNING
DO NOT OPERATE 240 VOLT SWITCH AND GAS SWITCH TOGETHER

TRUMA TEMPERATURE

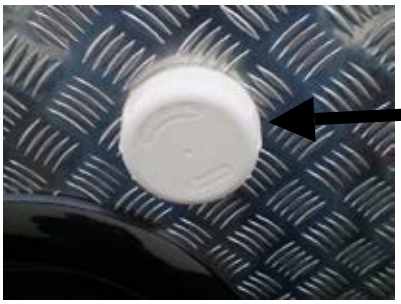
CONTROL SWITCH

Up	60 Degree
Down	70 Degrees

NOTE:

Electric isolation switch must be turned to OFF when operating unit on gas

TRUMA GAS HEATER.



Gas exhaust vent with cover on

Gas cover MUST be removed before you start heater….otherwise UNIT will not operate

Heating outlet vent and return air vent

Grey outer switch operates gas heater or fan only.

Black knob regulates fan speed 1 to 5 rate

CARAVAN 12 VOLT ELECTRICAL POWER SELECTOR

This power switch/dial is located inside the caravan and has three positions:

This switch has NOTHING to do with the 240volt power –

It is solely 12volt ONLY

- Zero (0) position.
- One (1) position.
- Two (2) position.

Position ZERO (0) – is the off position and isolates all 12 volt power to the caravan.

Position ONE (1) – is operating under 12 volt power from the caravan battery.

Position TWO (2)- allows the caravan to have a 12 volt power supply from the towing vehicle.

Picture

12 VOLT POWER SELECTOR

To operate the caravan on its own 12 volt power supply (battery) this switch/dial should be turned to the 1 position. If not turned to the 1 position you will **NOT** have 12 volt power to the van.

12 Volt power is drawn from the battery via the 'Battery Protector' switch which is typically located in the front boot of the caravan. (in most caravans)

BATTERY PROTECTOR

The **'VOLTAGE REGULATOR SWITCH'** switch is located under the ON/Off switch on the 'Battery Protector' this should be set at **11.0 Volts** to ensure that the battery does not exceed the voltage output.

IMPORTANT: If the caravan is being used for lengthy periods under 'House Power' only. This may result in loss of power due to the battery losing charge. This will be noticeable when lighting inside the van fails to operate sufficiently or 12 volt power is no longer available.

If this occurs YOU MAY lower the voltage output switch to 10.5 or 10 volts to reduce power. But always ensure that you return this switch back to 11.0 volts when battery is fully charged.

ENSURE VOLTAGE SETTING IS RETURNED TO 11 VOLTS

This battery protector is protected by a 50amp fuse. If the amber light is illuminated on the battery protector but there still is no power to the caravan then check the fuse.

NOTE: When your caravan is in storage for any length of time ensure that you switch OFF the battery protector to prevent the battery draining flat.

BATTERY CHARGER

The battery charger is designed to charge the battery when it is plugged into 240volt mains power or a generator.

If your van is fitted with Solar Panels then the battery is charged via the Solar Controller (Regulator)

Battery Charger

When the charger is operating correctly the ‘on charge’ light will activate. If this fails then check that the lead is correctly plugged in to the power point and the back of the unit. The battery charger also has an ‘on/off’ switch on the unit this should remain ‘ON’ at all times.

If charger is ON, but still no charge is taking place then check nearby battery protector fuse as previously mentioned.

TOILET CASSETTE

Read manual for individual toilet system operation.

Before operating any toilet system please ensure that the drainage cap is fitted to the external cassette unit.

Dometic Toilet system

Cap

Thetford toilet system

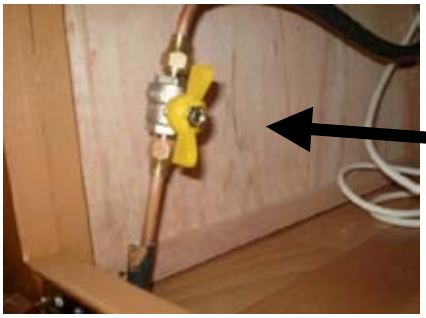
Release Latch

To remove the cassette simply lift the green or yellow release latches (depending on the model) and pull out.

GAS APPLICANCE SHUT OFF VALVE:

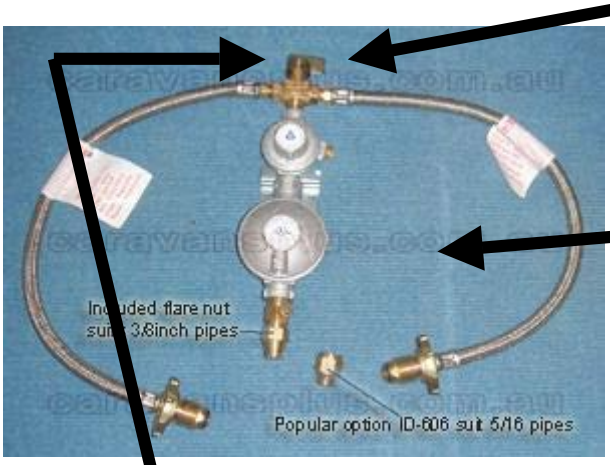
Every gas appliances in the caravan has a safety gas shut off valve (also known as a 'gas cock'). This valve enables the gas to be shut off to the appliance (Cook top – Oven – Hot water unit – Fridge) during maintenance, repairs or cleaning.

If there is no gas flow, to the appliance ensure that the valve is in the 'open' position as shown below and check that the valve of the regulator at the gas bottles is in the appropriate position to the gas bottle that is being used.



Valve is now open

One way valve – turn left for left gas bottle – turn right for right gas bottle

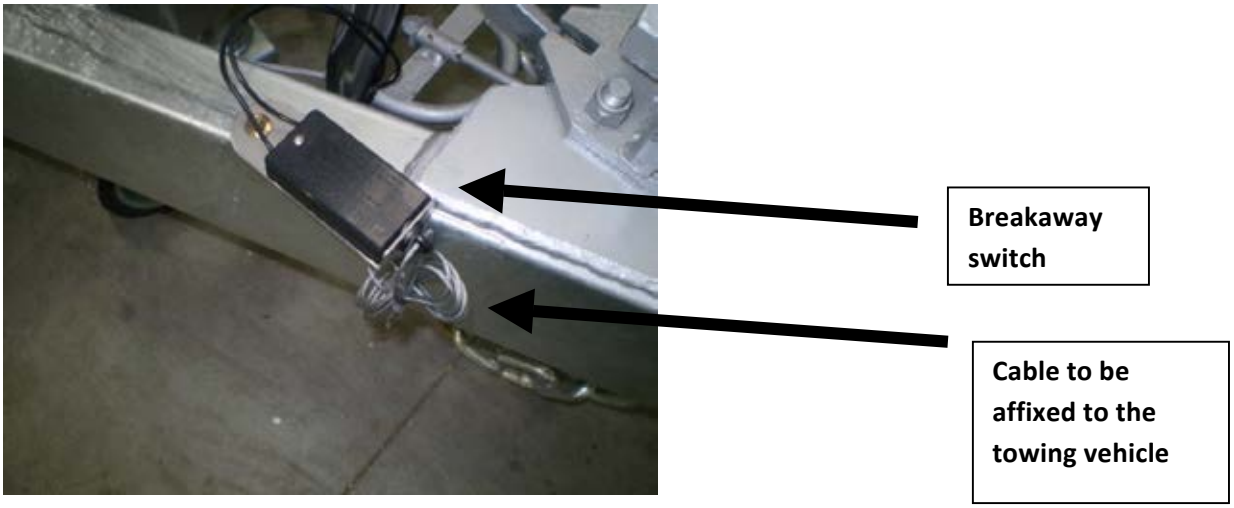


Twin gas regulator fitted to most caravans

Manual changeover valve

BRAKE SAFE SYSTEM:

The brake safe device is designed to automatically apply the electric brakes to the caravan in the event of an accidental separation from the towing vehicle.



The metal cable is attached to a permanent anchor point on the towing vehicle with minimal amount of slack in the cable to allow the pin in the brake safe switch to be pulled out of its housing to activate the emergency braking system.

IMPORTANT:

Do not use the brake safe system as a hand brake. This will cause the battery powering the brake safe system to lose power and became inoperative. (Flat battery)

The brake safe system is powered by the battery which is housed in a container located in the front boot (All models with front storage boot)

The battery is charged from the car via the number 2 pin on the trailer plug.

By pressing the ‘press’ button you can check the power level of the battery (either Normal charge or Low charge will be displayed)

Normal light indicates **battery charged**

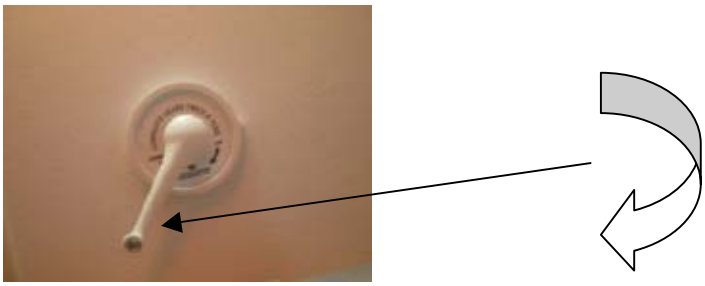
Low light indicator. **Battery Needs attention**

'Press' button to check battery level

The red charge light will activate once connected to the car via the number 2 PIN on the caravan plug and the power dial is turned to the number 2 position inside the caravan

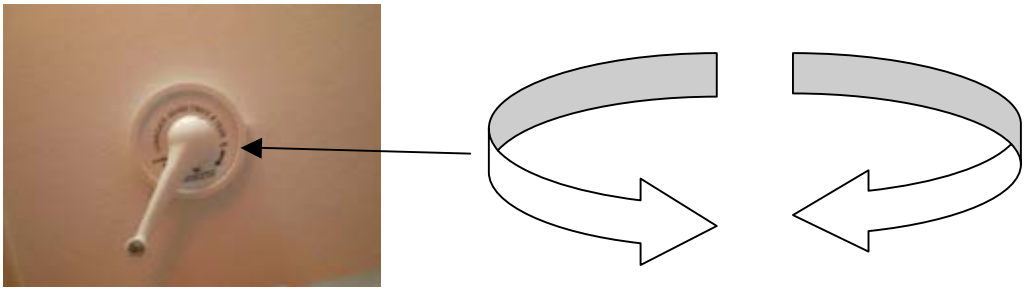
WINEGARD ANTENNA:

Raising the antenna to operating position turn the elevating crank (clockwise) in 'UP' direction about 13 turns or until resistance is reached.



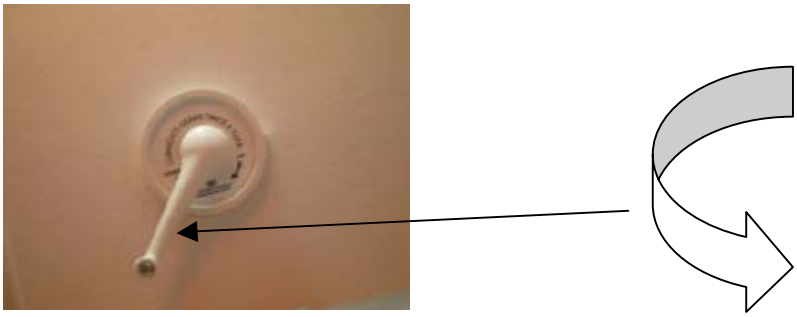
Rotating Antenna for Best Picture,

Make sure antenna is in "UP" position. Pull down on the rotating plate to disengage ceiling plate and rotate. By Rotating this plate you are now rotating the antenna.



Lowering antenna to travel position,

Rotate antenna until pointer on directional handle aligns with the pointer on the ceiling plate. Turn level crank (counter clockwise) in "DOWN" direction about 13 turns or until resistance is noted. Antenna is now locked in travel position.



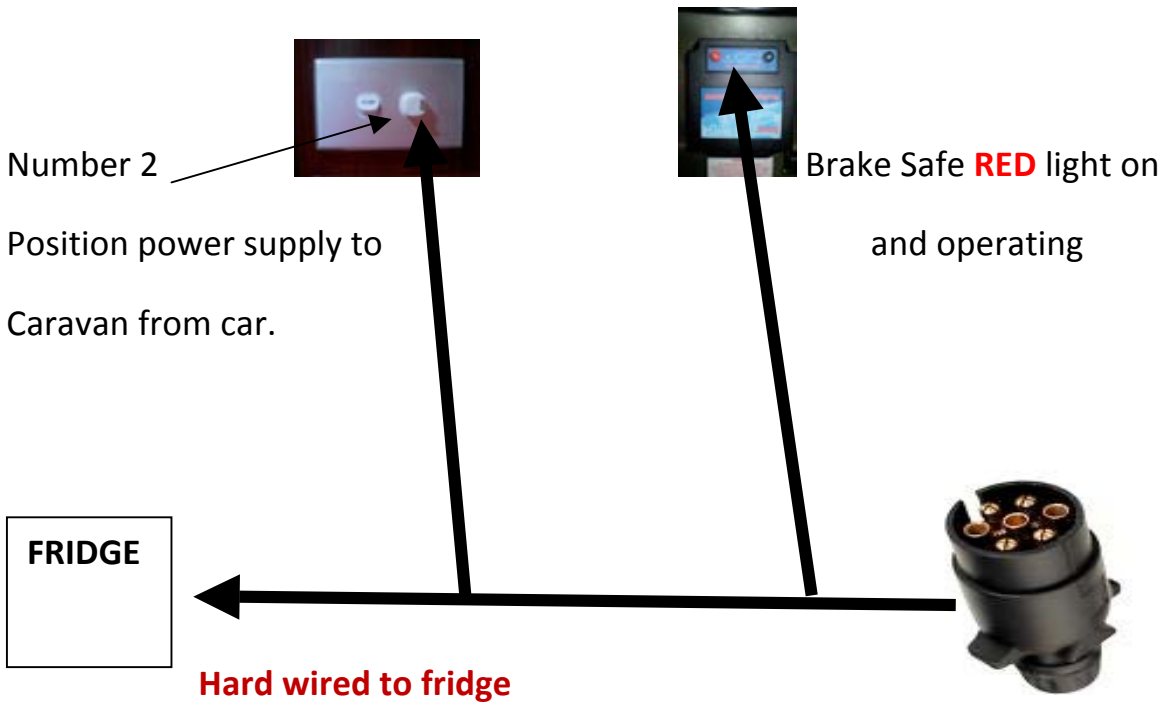
Fridge wiring to vehicle.

Pin number ‘TWO’ on the tow vehicle’s trailer plug is originally wired for the ‘Reverse Light’ for towing a standard trailer.

In a caravan it is used to power both the refridgerator and the breaksafe battery charge via the power switch dial inside the caravan (refer page 10)

You will need to engage an auto electrician to alter PIN number ‘TWO’ on the car’s tow plug base to be wired as an auxiliary (positive) via a solenoid switch which is to be located in the engine bay directly from the battery. Pin number 3 is the negative feed wire and must be 6mm to 8mm wire.

PIN number ‘TWO’ on the caravan plug is the auxiliary cable for a direct connection to the fridge (12 volt – DC - connection) operating from the tow vehicle under the alternator charge from the vehicle’s battery whilst under tow.



Note: A solenoid switch must be installed to act as an isolation switch to cut power to the fridge when the tow vehicle is no longer in use (turned off). **Failure to do so will result in the car battery being drained of its power.**

Seven pin round base – fitted to vehicle

Seven pin round plug – fitted to caravan

Seven Pin Flat Trailer Plug

If a seven pin flat trailer plug is required for the tow vehicle then 2 x ANDERSON PLUGS and WIRING are required to be fitted to accommodate the heavy wiring (6mm – 8mm) for the fridge and battery charging. The heavier wiring will not fit the terminals of the seven pin flat tow plug without substantially trimming of the wiring strands defeating the purpose of the heavy gauge wire

Adapter plug from seven pin flat to seven pin round.

Warning this adapter plug has 3mm wiring. This will NOT be sufficient to operate the fridge on the 12 volt system from the towing vehicle. If used, will cause the wiring to melt and possibly result in a fire. See an auto electrician to have the auxiliary wire upgraded to a minimum 6mm wire.

The remaining 3mm wiring in the adapter plug to operate the caravan brakes and caravan lighting is suitable.

ANDERSON plug when connected to the towing vehicle charges the caravan battery

TWELVE PIN PLUG WIRING.

Pin numbers 9 (Positive) and 11 (Negative) ...auxiliary connect for fridge

Pin numbers 8 (Positive) and 10 (Negative)....Anderson Plug connect.

When a 12 pin plug is fitted NO Anderson plug is supplied unless requested.

Shower head storage

Travellers are advised to ensure that the shower head is stored by placing it in a wrapping it in a cloth and placing it on the shower floor.

The shower head is not designed to remain in the cradle whilst travelling, and is it likely to dislodge and cause damage.

Correct storage of shower head when in transit

Do not leave shower head in cradle

Entrance door

Customers are advised NOT to cover or restrict air flow through the door vent.

Vents are designed and installed as a safety measure and must comply with Government Gas Regulations. Obstructing the vents would constitute a safety hazard and a contravention of these gas regulations

Fridge Fan Operation (where fitted)

Fridge Fan fitted to the rear of the fridge.

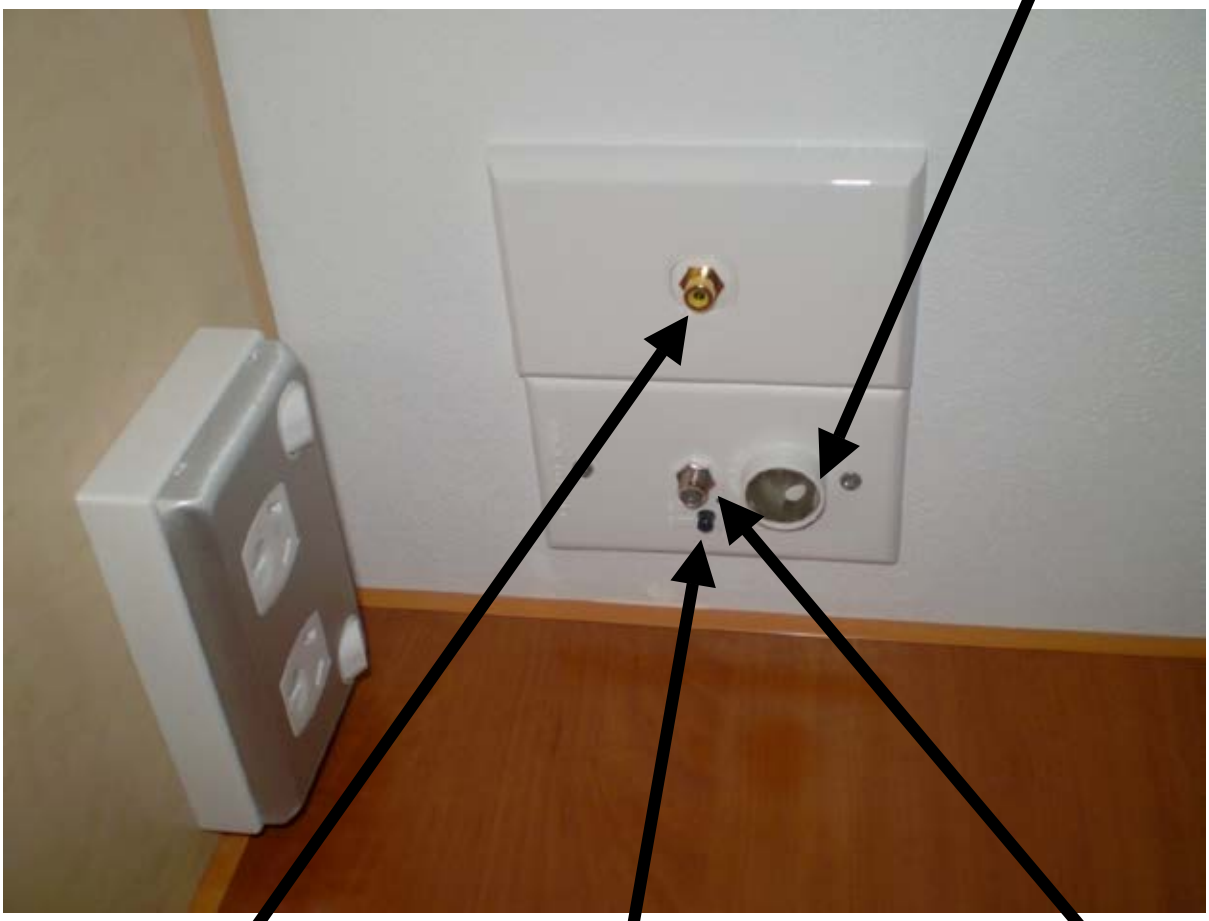
Thermostatically

Controlled. I.E. when the fridge gets too hot the fan activates automatically to create an air flow to cool the fridge coils and exhaust the hot air to outside via the fridge vents

Fridge Fan isolation switch. **Allows you the option to switch the fan off when in storage or when otherwise not required**

WARNING: Turning the fan off at night defeats the purpose of cooling the fridge as the fridge will need to work harder to regain its original temperature during the heat of the day.

TV and DVD connection



12 volt connection port

DVD Connection Port (Yellow RCA lead to connect to yellow port on TV

Black button:

Digital booster for Winegard Antenna.

When connected to caravan park satellite connection DO NOT TURN THE DIGITAL SATELLITE BOOST ON otherwise you will receive no reception

Aerial Connection Port

TOW PLUG WIRING

CARAVAN TRAILER PLUG COMBINATIONS
NEW SOUTH WALES ONLY

TRAILER PLUG TYPE	WIRED IN PLUG	ANDERSON PLUG FOR FRIDGE	ANDERSON PLUG FOR BATTERY
7 PIN FLAT PLUG FOR STANDARD FRIDGE	✓	✓	✓
7 PIN FLAT PLUG FOR AES FRIDGE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
7 PIN FLAT ROUND FOR STANDARD FRIDGE	NOT APPLICABLE	✓	✓
7 PIN FLAT ROUND FOR AES FRIDGE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
12 PIN FLAT PLUG FOR STANDARD FRIDGE	✓	NOT APPLICABLE	NOT APPLICABLE
12 PIN FLAT PLUG FOR AES FRIDGE	✓	NOT APPLICABLE	NOT APPLICABLE

CARAVAN TRAILER PLUG COMBINATIONS
ALL STATES EXCEPT NEW SOUTH WALES

TRAILER PLUG TYPE	WIRED IN PLUG	ANDERSON PLUG FOR FRIDGE	ANDERSON PLUG FOR BATTERY
7 PIN FLAT PLUG FOR STANDARD FRIDGE	NOT APPLICABLE	✓	✓
7 PIN FLAT PLUG FOR AES FRIDGE	NOT APPLICABLE	✓	✓
7 PIN FLAT ROUND FOR STANDARD FRIDGE	✓	NOT APPLICABLE	✓
7 PIN FLAT ROUND FOR AES FRIDGE	✓	✓	✓
12 PIN FLAT PLUG FOR STANDARD FRIDGE	✓	NOT APPLICABLE	NOT APPLICABLE
12 PIN FLAT PLUG FOR AES FRIDGE	✓	NOT APPLICABLE	NOT APPLICABLE

12 PIN TRAILER PLUG WIRING

12 Pin Wiring Diagram

1	Left-Hand Turn	Yellow
2	Break Safe - Monitoring	Purple
3	Earth	White
4	Right-Hand Turn	Green
5	Electric Brakes	Blue
6	Brake Lights	Red
7	Tail Lights	Brown
8	Battery	Red
9	Refridgerator	Red
10	Battery	Black
11	Refridgerator	Black
12	AES - Fridge D+	Grey

AL-KO ESC ELECTRONIC STABILITY CONTROL

When fitted additional Anderson plug for ESC power

Disclaimer:
Please note: Every effort has been put into ensuring the accuracy of this booklet however Crusader Caravans do not take responsibility for any discrepancy that may exist.

CRUSADERCARAVANS.COM.AU

Crusader CARAVANS

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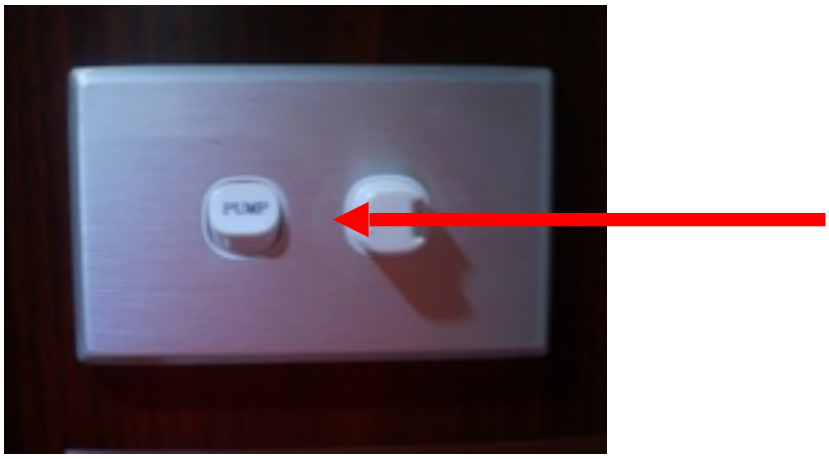
8 Dreamhaven Court, Epping, VIC 3076 – Po Box 1105, Epping DC, VIC 3076
T: 03 9408 0166 **F**: 03 9401 5225 **E**: admin@crusadercaravans.com.au

WATER PUMP OPERATION:

The water pump is operated by an isolation switch located inside the van (as seen below)

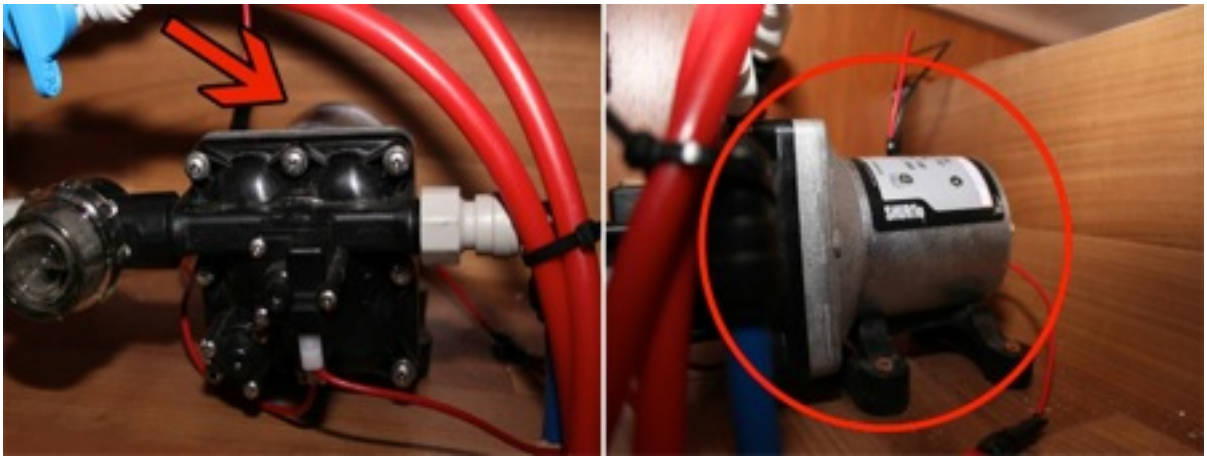
IMPORTANT.

When connected to mains water pressure, ensure that this isolation switch is turned off – OTHERWISE you will continue to pump water from your water tanks and NOT mains water.



The water pump is normally located under the fridge or in a separate cupboard nearby.

See picture below.



The water tanks are controlled by two separate isolation valves. It is ideal to close off one of these valves to ensure that water is only pumped from one tank at a time. This will prevent the pump drawing air from an empty tank if both valves are open. Then once this tank has emptied shut off and open the other valve to the water tank with water. This will then enable water to be pumped from the second tank without experiencing any difficulty or damage to the pump. (Pumping dry and burning out)

Isolating either valve restricts the flow of water from either tank. (See Below)

FILLING TANKS

There are two methods in filling your water tanks.

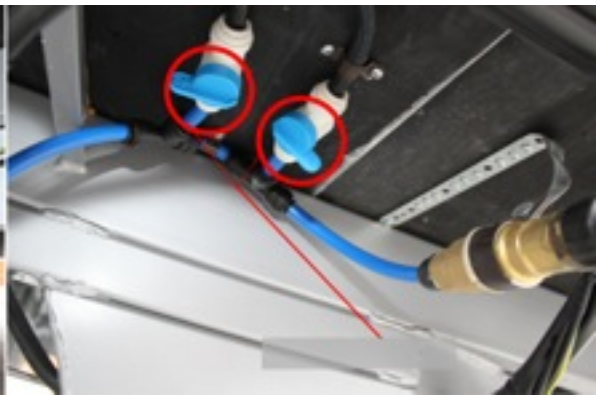
Firstly manually through the water fillers....

ection and via the switch opening them to allow water

to fill the tanks. Once completed, you will notice two clear pipes also underneath the caravan. These clear pipes are your overflow indicators. You can now switch the valves off and continue to use main pressure once the tanks are full.

Ensure that these valves are switched off when operating the water pump otherwise the pump may draw air into the system.

Main Pressure Connection



Switch valves

IMPORTANT.

When connected to mains water pressure, ensure that the pump isolation switch is turned off – OTHERWISE you will continue to pump water from your water tanks and NOT mains water.

BLEEDING THE WATER SYSTEM

If you discover that there is minimal water flow when operating under the water pump or there is obvious indicating that air is in your water pipes. You need to bleed the system.

Procedure: Open all taps (Ensuite – vanity – shower – kitchen – A frame tap)

Turn on water pump. Proceed to A frame tap....once water is flowing normally turn tap off....follow same procedure with kitchen tap – vanity and shower.

The system has now been bled of any air pockets.

HOT WATER OPERATION:

SUBURBAN HOT WATER UNIT

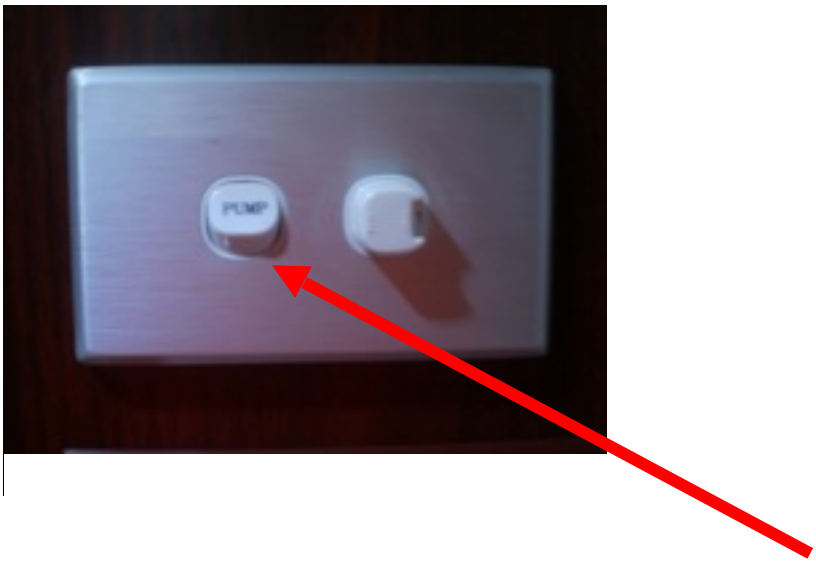
Before you proceed to operate the Hot Water Unit ensure that there is water in the water tank of the hot water unit.

You can check this by releasing the pressure release valve to ascertain that there is continuous water flow out from the unit. See picture 1.

picture 1:

If not – ensure that the mains water is connected to the caravan or ensure that your water pump switch is operating (Picture 2) and there is sufficient water in the water tanks fitted to the van.

Picture 2:



240 Volt operation:

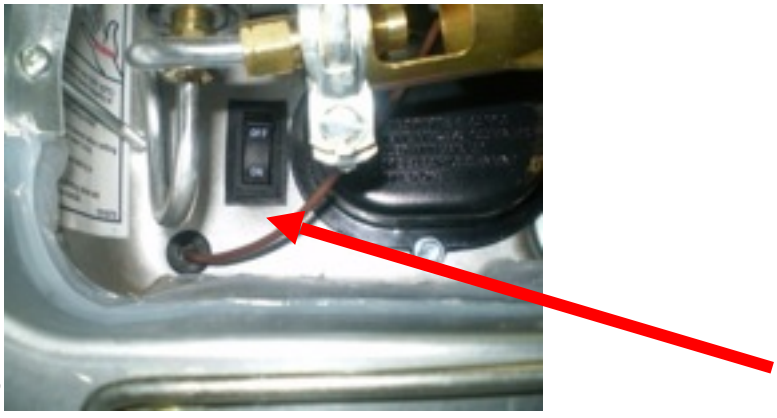
IMPORTANT: There are three 240volt switches associated in using the hot water unit.

Step 1. Inside the van, as pictured below (picture 'A') you will find a Hot Water isolation switch. This switch is used to turn on the 240 volt power point where the HWU is plugged into to operate the unit.

Picture 'A'

Step 2. This 'On / Off' switch (picture 'B') is located on the unit and accessed from the external hatch opening. This is the main 240 volt switch to the unit and must be left on at all times as the isolation switch (picture 'A') works in conjunction with this switch (picture 'B')

Picture 'B'



Step 3.

The hot water unit is connected to a 240 volt power (on/off) wall switch located inside a cupboard near the unit. Ensure that this is plugged in and switched on.

See below:

If either one of these three switches is in the 'OFF' position then the hot water unit will not operate under 240 volt power.

Gas Operation:

For gas operation, please ensure the gas bottles are full and the gas line is open. Also ensure that the gas cock valve is open to allow gas to flow to the unit. By turning the 'Water Heater' button (picture 'C') on the 'reset' red light will alight and automatically operate the unit.

Valve is now open

Picture ‘C’

Red light will alight when gas unit is operating or reheating

WARNING: DO NOT HAVE THE 240 VOLT AND GAS SWITCH OPERATING AT THE SAME TIME.

TRUMA HOT WATER UNIT

Before you proceed to operate the Hot Water Unit ensure that there is water in the water tank of the hot water unit. Also ensure that the cover is removed before turning the hot water unit on.

COVER TO VENT

Remove cover before turning hot water unit on… otherwise unit will not operate

240 volt isolation switch to wall power point plug inside cupboard for hot water unit

Gas switch

WARNING
DO NOT OPERATE 240 VOLT SWITCH AND GAS SWITCH TOGETHER

TRUMA GAS HEATER.

Gas exhaust vent with cover on

Gas cover MUST be removed before you start heater….otherwise UNIT will not operate

Heating outlet vent and return air vent

Grey outer switch operates gas heater or fan only.

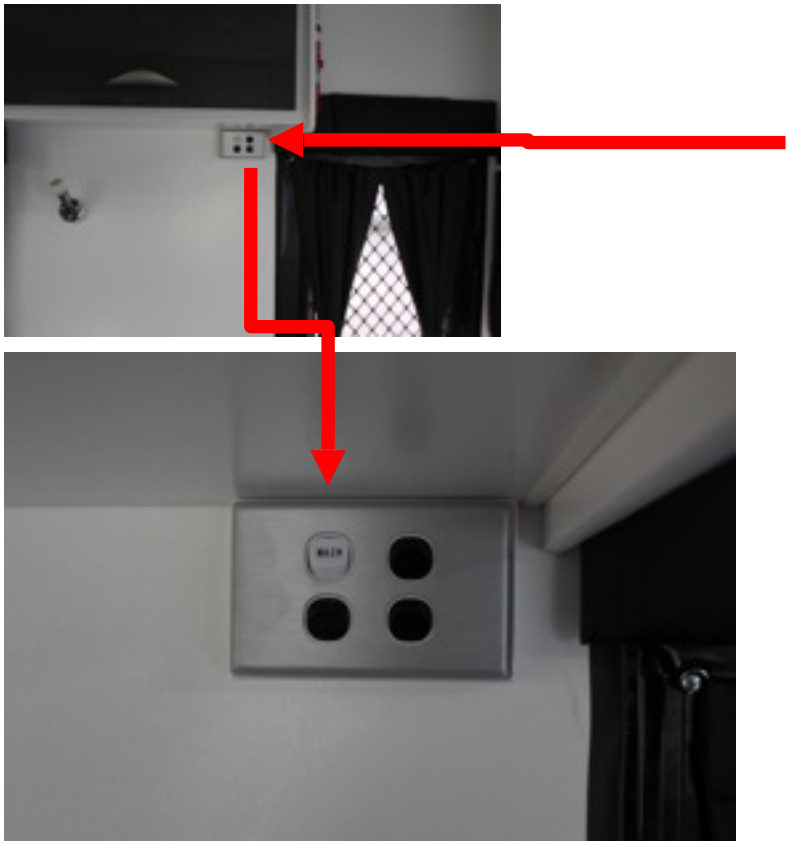
Black knob regulates fan

MAINS POWER SWITCH

The Mains switch allows 12 volt power to the caravan via the caravan battery

Picture

THE MAINS 12VOLT SWITCH IS NORMALLY LOCATED JUST INSIDE THE DOOR ENTRANCE ABOVE HEAD HEIGHT.



12 Volt power is drawn from the battery via the 'Battery Protector' switch which is located in the front boot of the caravan. (in most caravans).....The battery protector switch must remain in the OFF positions, because the 12 volt power supply has bypass this switch (NOT bypassed the battery protector unit)

The **'CUT OUT VOLTAGE'** switch is located under the ON/Off switch on the 'Battery Protector' this should be left on **11.0 Volts** to ensure that the battery does not exceed the voltage output.

IMPORTANT: If the caravan is being used for lengthy periods under 'House Power' only. This may result in loss of power due to the

battery losing charge. This will be noticeable when lighting inside the van fails to operate sufficiently or 12 volt power is no longer available.

If this occurs YOU MAY lower the voltage output switch to 10.5 or 10 volts to reduce power. But always ensure that you return this switch back to 11.0 volts when battery is fully charged.

This battery protector is governed by a 50amp fuse. The amber lights needs to be 'on' to ensure there is a 12 volt supply to the caravan.

BATTERY CHARGER

The battery charger is a devise designed to charge the battery when it is plugged into 240volt mains power or a generator.

If your van is fitted with Solar Panels then the battery is charged via the Solar Controller (Regulator)

Battery Charger

When the charger is operating correctly the **'On Charge'** light will activate. If this fails then check that the lead is correctly plugged in to the power point and the back of the unit. The battery charger also has an 'on/off' switch on the unit this should remain 'ON' at all times. A fuse is located at the rear of the unit which needs to be unscrewed from the unit.

What will accompany the **"On Charge Light"** will be one of the three other lights**....."Bulk"....Absorption"....."Float".....**if this doesn't occur check unit.

If charger is ON, but still no charge is taking place then check nearby fuse.

TOILET CASSETTE

Read manual for individual toilet system operation.

Before operating any toilet system please ensure that the drainage cap is fitted to the external cassette unit.

Dometic Toilet system

Cap

Thetford toilet system

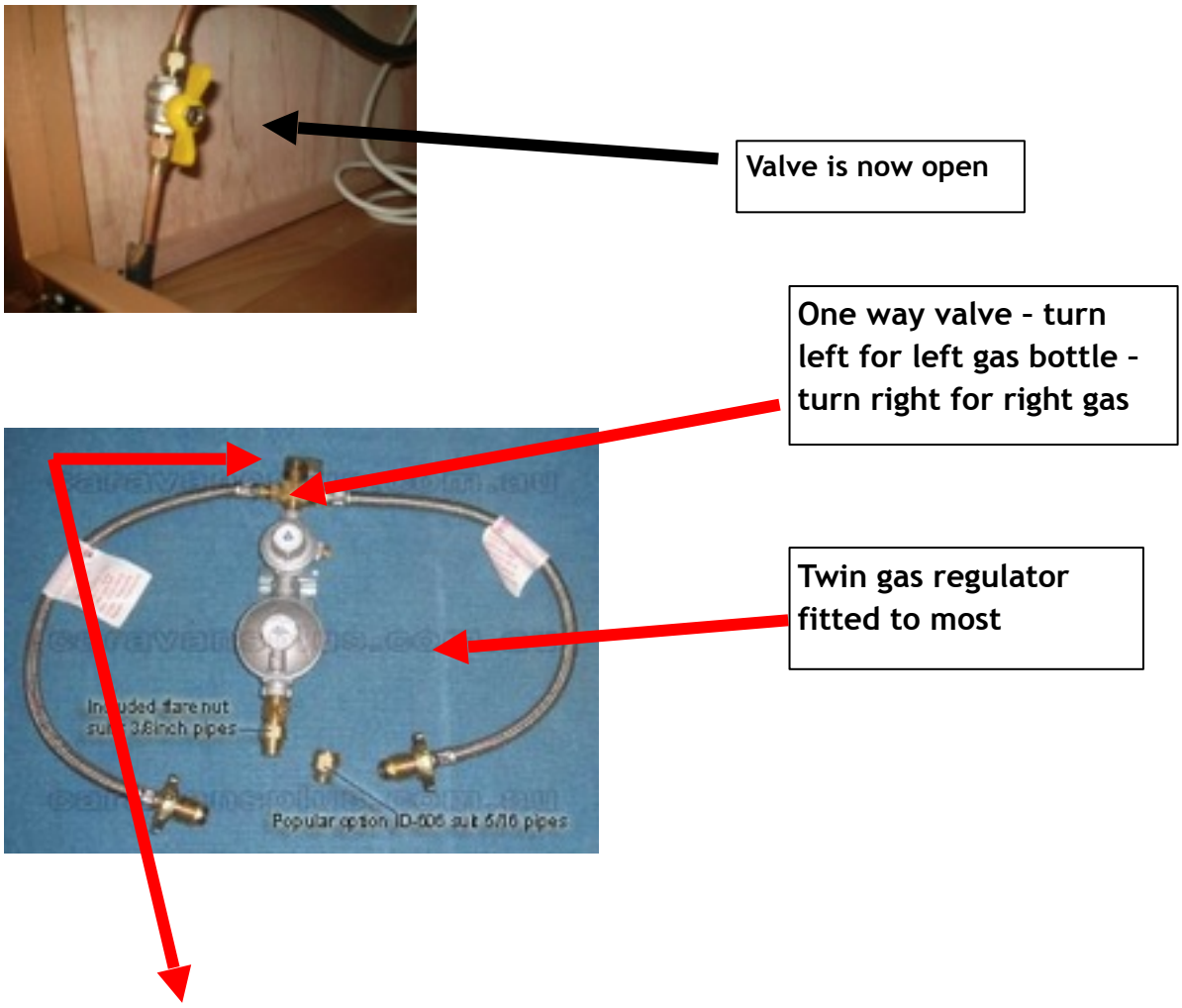
Release Latch

To remove the cassette simply lift the green or yellow release latches (depending on the model) and pull out.

GAS APPLICANCE SHUT OFF VALVE:

Every gas appliances in the caravan has a safety gas shut off valve (also known as a ‘gas cock’). This valve enables for the gas to be shut off to the appliance (Cook top – Oven – Hot water unit – Fridge) during maintenance, repairs or cleaning.

If there is no gas flow, to the appliance ensure that the valve is in the ‘open’ position as shown below and check that the valve of the regulator at the gas bottles is in the appropriate position to the gas bottle that is being used.



Manual changeover valve

BRAKE SAFE SYSTEM:

The brake safe device is designed to automatically apply the electric brakes to the caravan in the event of an accidental separation from the towing vehicle.

Breakaway switch

Cable to be affixed to the towing vehicle

The metal cable is attached to a permanent anchor point on the towing vehicle with minimal amount of slack in the cable to allow the pin in the brake safe switch to be pulled out of its housing to activate the emergency braking system.

IMPORTANT:

Do not use the brake safe system as a hand brake. This will cause the battery powering the brake safe system to lose power and became inoperative. (Flat battery)

The brake safe system is powered by the battery which is housed in a container located in the front boot (All models except Tourline model)

The battery is charged from the car via the number 2 pin on the trailer plug.

By pressing the ‘press’ button you can check the power level of the battery (either Normal charge or Low charge will be displayed)

Normal light indicates battery charged

Low light indicator. Battery Needs attention

‘Press’ button to check battery level

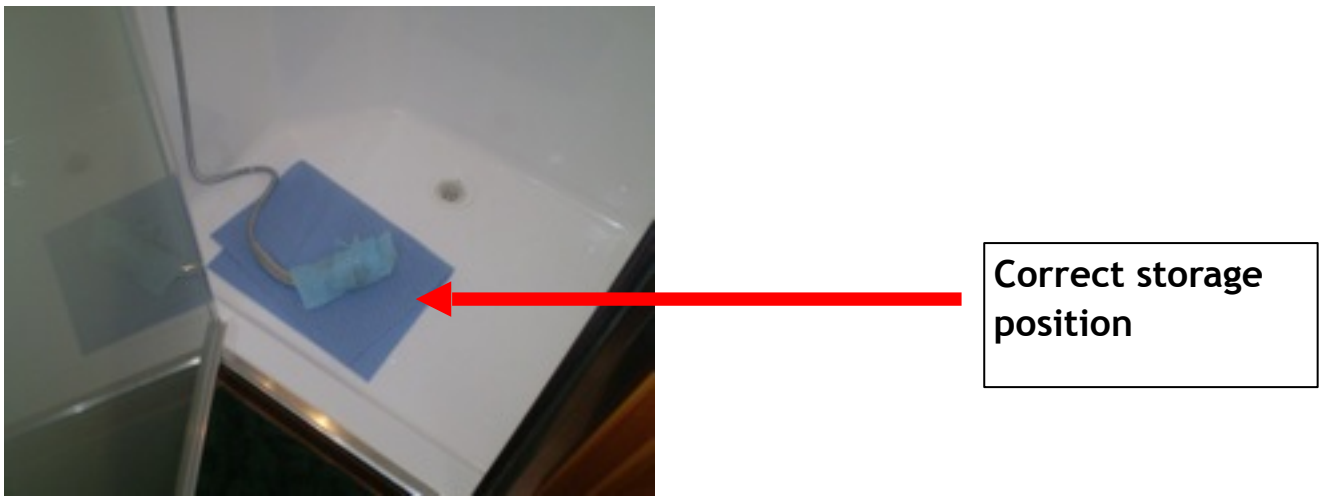
The red charge light will activate once connected to the car via the number 2 PIN on the caravan plug and the power dial is turned to the number 2 position inside the caravan

Refer to wiring options sheet.....car to caravan

Shower head storage

Travellers are advised to ensure that the shower head is stored by placing it in a wrapped clothe and placed on the shower floor.

The shower head is not designed to remain in the cradle whilst travelling, because it likely to dislodge and thus damage.



Do not leave shower head in cradle

Entrance door

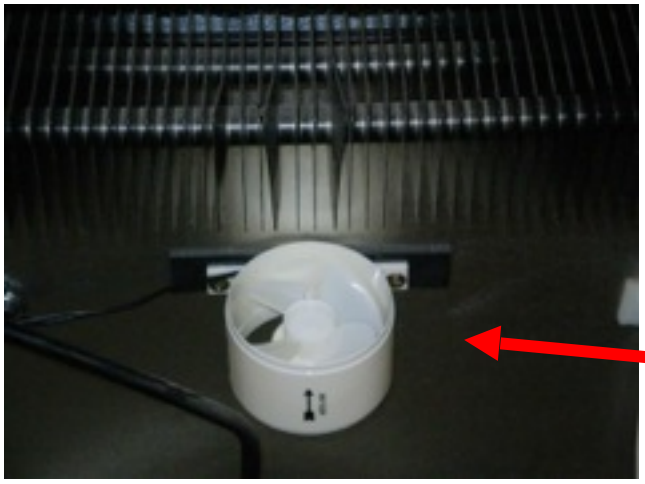
Customers are advised NOT to cover or restrict air flow to the door vent. This vent is designed as a safety measurement under the Standard Manufacturing Regulations.

DO NOT COVER OR

RESTRICT AIR

FLOW TO THIS VENT

Fridge Fan Operation (On Selected Caravan Models)



Fridge Fan fitted to the rear of the fridge.

Thermostatically

Controlled. I.E. when the fridge gets too hot the fan activates to create an air flow to cool the fridge coils.

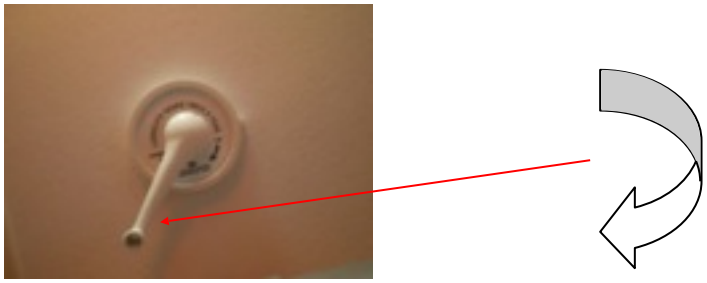
Fridge Fan isolation switch.

Giving you the option to switch the fan off when in storage or during the night.

WARNING by turning it off at night defeats the purpose of cooling the fridge whilst in use thus causing the fridge to work

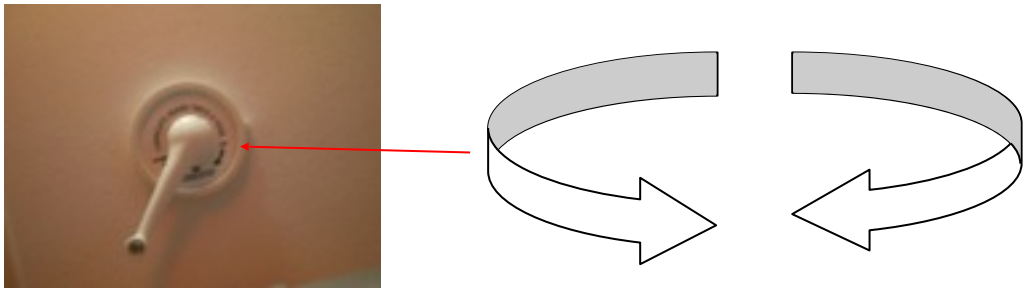
WINEGARD ANTENNA:

Raising the antenna to operating position turn the elevating crank (clockwise) in ‘UP’ direction about 13 turns or until resistance is reached.



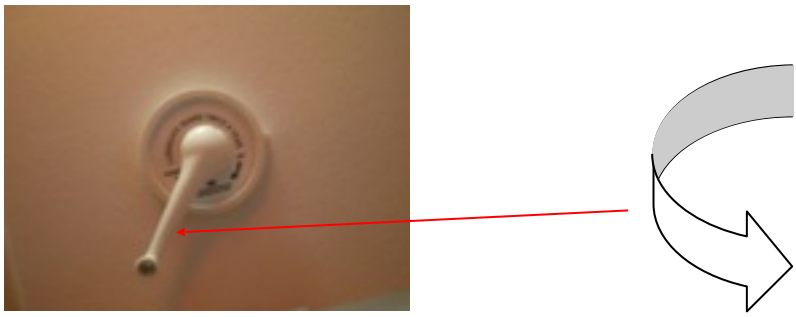
Rotating Antenna for Best Picture,

Make sure antenna is in “UP” position. Pull down on the rotating plate to disengage ceiling plate and rotate. By Rotating this plate you are now rotating the antenna.

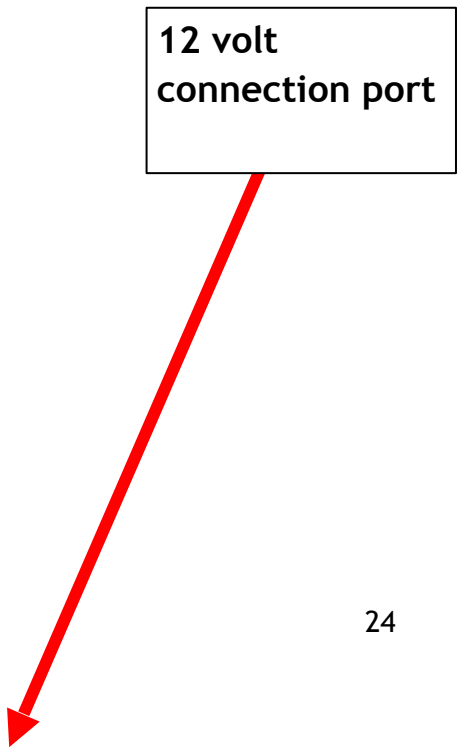


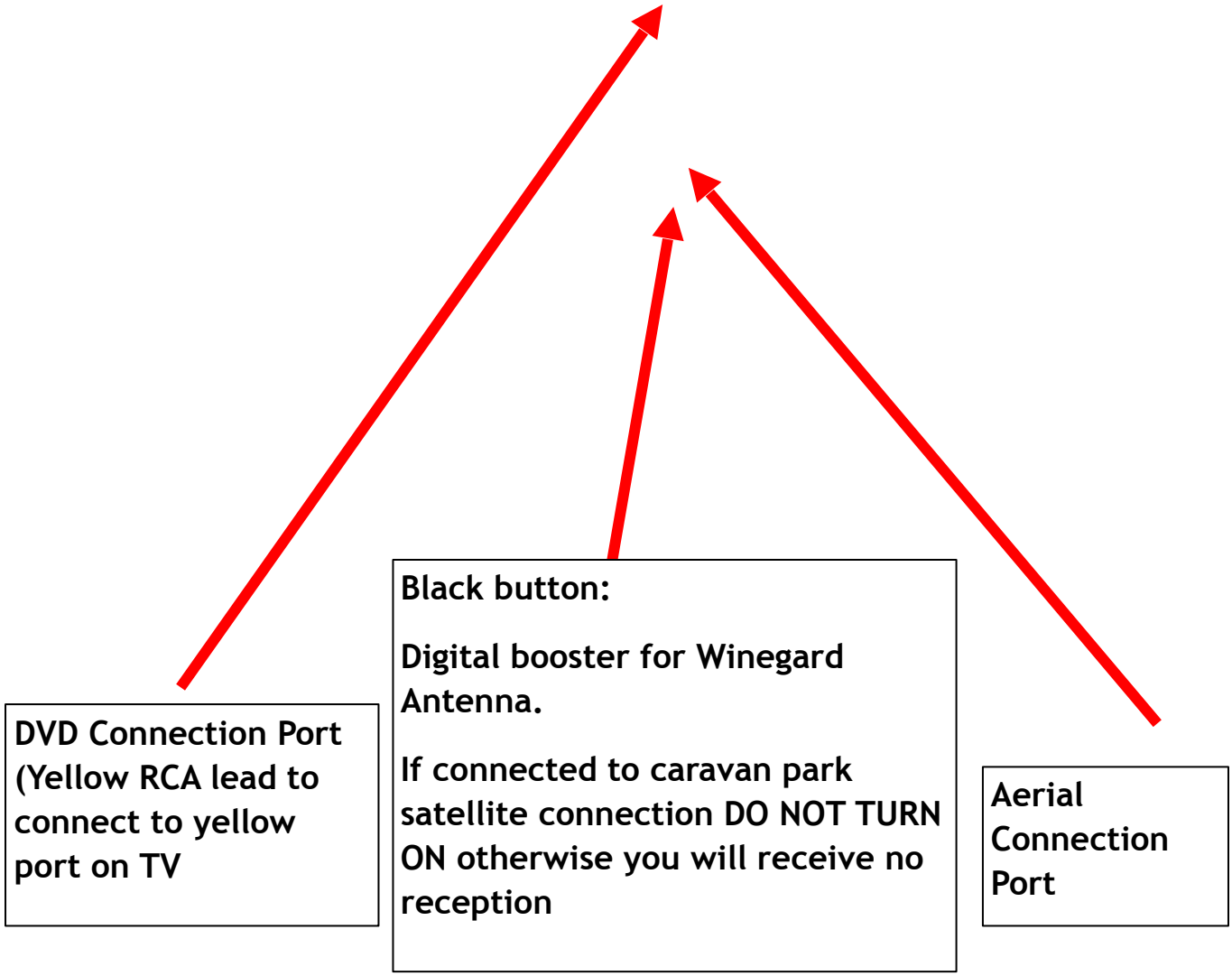
Lowering antenna to travel position,

Rotate antenna until pointer on directional handle aligns with the pointer on the ceiling plate. Turn level crank (counter clockwise) in “DOWN” direction about 13 turns or until resistance is noted. Antenna is now locked in travel position.



TV and DVD connection




DVD Connection Port (Yellow RCA lead to connect to yellow port on TV
Black button:
Digital booster for Winegard Antenna.
If connected to caravan park satellite connection DO NOT TURN ON otherwise you will receive no reception
Aerial Connection Port